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Case No.: 55250US002

**IN THE UNITED STATES PATENT AND TRADEMARK OFFICE**

First Named Inventor: BENSON, GERALD M.  
Application No.: 09/515978 Confirmation No.: 9164  
Filed: February 25, 2000 Group Art Unit: 1794  
Title: A COMPOUND MOLD AND STRUCTURED SURFACE  
ARTICLES CONTAINING GEOMETRIC STRUCTURES WITH  
COMPOUND FACES AND METHOD OF MAKING SAME

**PRE-APPEAL BRIEF REQUEST FOR REVIEW**

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Commissioner for Patents  
P.O. Box 1450  
Alexandria, VA 22313-1450

<b>CERTIFICATE OF MAILING OR TRANSMISSION [37 CFR § 1.8(a)]</b>	
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June 5, 2009	/Rebecca C. Bode/
Date	Signed by: Rebecca C. Bode

Dear Sir:

In response to the final action dated March 16, 2009, and prior to filing an appeal brief, a Panel Review of the legal and factual basis of the rejections in the above-identified application is hereby requested. No amendments are being filed with this request. This Pre-Appeal Brief and Request for Review is being filed with a Notice of Appeal.

**Fees**

- ☐ Any required fee will be made at the time of submission via EFSWeb. In the event fees are not or cannot be paid at the time of EFS-Web submission, please charge any fees under 37 CFR § 1.17 which may be required to Deposit Account No. 13-3723.
- ☐ Please charge any fees under 37 CFR §§ 1.16 and 1.17 which may be required to Deposit Account No. 13-3723.
- ☒ Please charge any additional fees associated with the prosecution of this application to Deposit Account No. 13-3723. This authorization includes the fee for any necessary extension of time under 37 CFR § 1.136(a). To the extent any such extension should become necessary, it is hereby requested.
- ☒ Please credit any overpayment to the same deposit account.

## REMARKS

### Status of the Claims:

Claims 9-14, 16-37, and 40 are pending. Claims 1-8, 15, 38, and 39 have been cancelled. Claims 9-14 and 24-37 are withdrawn. Claims 16-23 and 40 stand rejected.

### Review is requested for the following reasons:

Claims 16-23 and 40 stand rejected as purportedly anticipated under 35 U.S.C. § 102(b) by U.S. Patent No. 6,657,162 to Nilsen et al. ("Nilsen"). Appellant disagrees and contends that Nilsen fails to teach each and every element of the rejected claims.

### Issue on Appeal

The issue on appeal is the meaning of the word "embedded" as used in the pending independent claims. Applicant asserts that the word "embed" is defined by The American Heritage® Dictionary of the English Language (Fourth Edition 2000) as "[t]o fix firmly in a surrounding mass." Appellant then asserts that Nilsen neither describes nor shows discrete pieces that are fixed firmly in a surrounding mass. Instead, Nilsen only shows at FIG. 2 and describes at col. 2, lines 64-65 forming "transparent reflective metallic deposits on the surface of the micropism formations" (emphasis added). As such, appellant asserts that Nilsen does not teach all of the elements of independent claims 16, 20, and 40.

In contrast, the Examiner asserts that she "interprets 'embed' to merely mean to make something an integral part, see Merriam-Webster on-line dictionary" (03/16/09 Office Action, p. 3). The Examiner then asserts that the coatings of Nilsen are an integral part of the structure of Nilsen and thus Nilsen anticipates the pending independent claims. *Id.* Also, the Examiner asserts that even if "embedded" means "to fix firmly in a surrounding mass," the coatings of Nilsen are fixed firmly in a surrounding mass and thus Nilsen anticipates the pending claims.

### The Correct Definition of the Word "Embedded" in the Pending Claims

Appellant asserts that the correct definition of the word "embedded" as used in the pending independent claims is "[t]o fix firmly in a surrounding mass," as provided in The American Heritage® Dictionary of the English Language (Fourth Edition 2000). Appellant directs the Panel's attention to *Ex parte Owens and Wyman* in which the Board of Patent Appeals and Interferences recently defined the word "embedded" in exactly this manner (Appeal No.

2008-4654, p. 11 FN2 (January 12, 2009)).<sup>1</sup> Additionally, the definition adopted in *Ex parte Owens and Wyman* is consistent with the description and Figures of the compound substrate in the pending application. Additionally, Appellant directs the Panel to *In re Engle* in which the Court of Customs and Patent Appeals held that although “[i]t is true that the term ‘embed’ is sometimes used with the meaning given to it by the Solicitor . . . [t]hat is the meaning ‘lying upon,’ . . . [i]t is quite obvious that the word ‘embedded’ should be given the meaning which . . . is contended by appellant should apply here; namely that the head of the actuating pin was surrounded by the rubber substance of the value.” 23 C.C.P.A. 1203, 1205-1206, 83 F.2d 922, 923 (1936). Appellant also refers to the Board to the following additional cases whose findings regarding the definition of the word “embedded” are consistent with the definition asserted by appellant: *Application of Leshin*, 47 C.C.P.A. 909, 277 F.2d 197 (1960); and *In re Jones*, 31 C.C.P.A. 848, 140 F.2d 159 (1944). For all of these reasons, appellant urges this Panel to follow the Board’s ruling that “embed” means “[t]o fix firmly in a surrounding mass.”

Appellant next responds to the Examiner’s argument that the word “embedded” in the pending claims means “to make something an integral part.” The Examiner cites the Merriam-Webster OnLine Dictionary for support for this definition (03/16/09 Office Action, p. 3). However, without explanation, the Examiner cites the second definition given by the Merriam-Webster OnLine Dictionary rather than the first definition<sup>2</sup>. Appellant first asserts that the Examiner should have used the definition provided by appellant during prosecution and affirmed by the Board of Patent Appeals and Interferences in *Ex parte Owens and Wyman*. Second, appellant asserts that the Examiner’s unexplained choice of the second definition over the first definition was in error because only the first definition is consistent with both the pending specification and figures and the decision in *Ex parte Owens and Wyman* in stating that in order to be embedded, at least a portion of something must be *enclosed in* something else.

Nilsen Does Not Teach Discrete Pieces that are Fixed Firmly in a Surrounding Mass

Nilsen generally relates to “retroreflective sheeting and articles in which the size of the retroreflective and non-retroreflective surfaces may be varied across an array of microprisms. . . by varying the locations of the reflective coating applied to the microprism side facets, such that,

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<sup>1</sup> The Board in *Ex parte Owens and Wyman* also states that “embedded” covered an embodiment in which a portion of material is exposed such that not all of the material is embedded in a surrounding mass. *Id.* at pages 10-11.

some prism side facets are completely coated with reflective material while others are coated only at the apex area; and still others are coated with a non-reflective coatings [sic], such as, a colored adhesive" (Abstract). Fig. 2 of Nilsen (below) shows metallic deposits 30A and 30B applied on cured fluid resin 26.

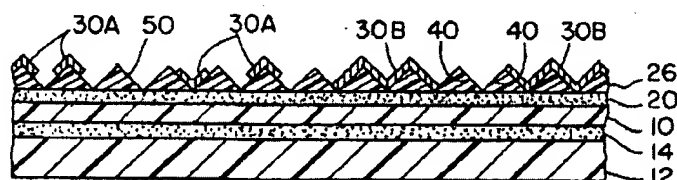


FIG. 2

Nilsen describes forming "transparent reflective metallic deposits on the surface of the microprism formations" (col. 2, lines 64-65 (emphasis added)). The Examiner asserts that metallic deposits 30A and 30B on the surface of resin 26 are embedded in resin 26.

In contrast, the present application generally relates to a novel and inventive compound substrate, which is defined as "a substrate formed from a machined substrate having a structured surface and a replicated substrate . . . bonded along at least a portion of the interface with the machined substrate" (page 26, lines 19-22). Fig. 9 (below) is a schematic illustration of a compound substrate (82) in which a replicated substrate (70) is bonded along at least a portion of the interface with the machined substrate (28).

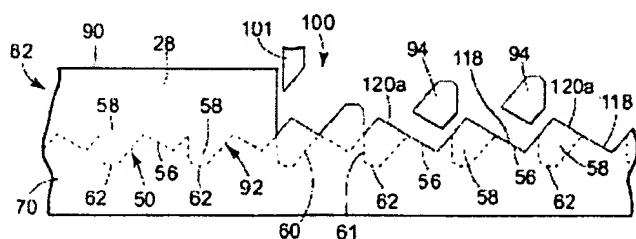


Fig. 9

As is shown in Fig. 9, compound substrate 82 "comprises the machined substrate 28 and the un-separated replicated substrate 70. The interface 92 between the structured surface 50 [of machined substrate 28] and the replicated substrate 70 is indicated by dashed line" (p. 12, ll. 19-22). After the machining step is complete, "waste portions 94 of the machined substrate 28 fall

<sup>2</sup> The first definition is "to enclose closely in or as if in a matrix."

away or are removed, leaving a cube corner cavity 118 in the replicated substrate 70" (p. 13, ll. 9-11). "The distal ends or top surfaces 62 of the discrete pieces or protrusions 58 from the machined substrate 28 are bonded to the replicated substrate 70. Bottom or proximal portions of the protrusions 58 are machined to form cube corner pyramids 120a. The protrusions 58 on the machined substrate 28 remain embedded in the replicated substrate 70. Once all of the waste portions 94 of the machined substrate 28 are removed from the replicated substrate 70, the cube corner pyramids 120a [from the machined substrate 28] and cube corner cavities 118 [from the replicated substrate 70] form a geometric structured surface 100 with an array of PG cube corner elements" (p. 13, ll. 13-20 (emphasis added)).

Independent claim 16 recites "a plurality of machined substrate pieces embedded in portions of the structured surface" and "a machined substrate piece embedded in a portion of the structured surface." Independent claim 20 recites "a plurality of discrete pieces of the machined substrate embedded in the structured surface." Independent claim 40 recites "a machined substrate portion embedded in the replicated substrate portion."

Nilsen does not describe pieces embedded *in* a substrate, as is recited in the pending claims. In contrast, the metallic deposits of Nilsen are, by Nilsen's own admission, merely coated *on the surface* of the micropisms and are not fixed firmly in a surrounding mass. Because the coatings of Nilsen are *on the surface*, they are not (1) *in* a surrounding mass; and (2) there is no *surrounding mass* because the coatings only contact the mass along one surface.

Appellant does not assert that these are the only errors that the Examiner has made, nor does appellant waive any arguments that may be asserted in an Appeal Brief. Accordingly, appellant reserves the right to present additional arguments in the Appeal Brief in relation to the independent and also the dependent claims. Appellant respectfully requests that the Panel review and reverse the final rejection of claims 16-23 and 40 in the above-identified application, and that a Panel Decision allowing the application on the existing claims be issued.

Respectfully submitted,

June 5, 2009

Date

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